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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,068	09/22/1999	ALLEN GERSHO	SIG5116.01A	4146

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EXAMINER

ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
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2626

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/401,068	Applicant(s) GERSHO ET AL.	
	Examiner Angela A. Armstrong	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18, 24, 26 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-17, 19, 20, 25 and 28 is/are rejected.
- 7) ☒ Claim(s) 13, 14 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-12, 15-17, 19, 25, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Fette et al (US Patent No. 5,255,339).
2. Regarding claims 1, 19, 25, and 28, Fette discloses a low bit rate vocoder means and method (col. 14, line 45 to col. 15, line 62) which implements and/or comprises a superframe buffer for receiving multiple frames of voice data (102); (b) a frame-based voice encoder analysis module for extracting parametric voice data from each frame within the superframe buffer (102); (c) a superframe encoder for receiving parametric voice data for a series of frames within the superframe buffer from the analysis module, wherein parametric voice data received from the analysis module is selectively quantized to produce voice data which is encoded into an outgoing digital bit stream for transmission (122-130; 132); (d) a superframe decoder for receiving and decoding a digital bit stream encoded with superframe voice data into quantized frame-based parameters (152); (e) a frame-based decoder synthesizer for receiving the quantized parameters into a synthesized voice output (154; 162-186).

Regarding claim 2, Fette discloses a low bit rate vocoder means and method (col. 14, line 45 to col. 15, line 62) which implements and/or comprises a superframe buffer for receiving multiple frames of voice data (102); (b) a frame-based voice encoder analysis module for extracting parametric voice data from each frame within the superframe buffer (102); (c) a superframe

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encoder for receiving voice data parameters from the analysis module for a group of frames contained within the superframe buffer (122-130;132).

Regarding claim 3, Fette discloses the analysis module is selected from the group of voice encoders consisting of linear predictive coders, mixed-excitation linear prediction coders, harmonic coders, and multiband excitation coders (col. 5, line 55 to col. 6, line 2; col. 7, lines 10-19).

Regarding claim 4, Fette discloses the superframe encoder includes at least two parametric processing modules of pitch smoothers, linear predictive quantizers and jitter quantizers (col. 7, lines 10-19; col. 9, line 47 to col. 13, line 65).

Regarding claims 5 and 6, Fette discloses the superframe encoder includes a vector quantizer for quantizing pitch values (col. 10, line 45 to col. 13, line 65).

Regarding claims 7-9, Fette discloses the superframe encoder includes a quantizer of linear prediction parameters (including LSF parameters) based on codebook-based interpolation (col. 9, line 47 to col. 10, line 44),

Regarding claims 10-12, Fette discloses the superframe encoder includes a pitch smoother (col. 10, line 45 to col. 13, line 65).

Regarding claim 15, Fette discloses compressing aperiodic flag bits for each frame in a superframe into a single bit per superframe (col. 10, line 45 to col. 13, line 65).

Regarding claim 16, Fette discloses the superframe encoder includes a plurality of quantizers for encoding parametric data into a set of bits, wherein at least one of said quantizers employs vector quantization to represent interpolation coefficients (col. 9, line 47 to col. 13, line 65).

Regarding claim 17, Fette discloses classification of superframes based on voiced and unvoiced frames within the superframe (col. 10, line 45 to col. 13, line 65).

3. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Hardwick et al (US Patent No. 5,664,051).

Hardwick discloses method and apparatus for phase synthesis for speech processing in a speech decoder apparatus. Regarding claim 20, Hardwick discloses buffering a received parametric voice data stream having a plurality of pitch periods (10); constructing an estimated spectrum of excitation within each pitch period by breaking down the frequency spectrum into regions based on a cutoff frequency, by computing a Fourier magnitude for each region, computing phase for each region and converting the Fourier magnitude and phase to a time domain representation (12,14,16); and generating an analog voice signal from said time domain representation (18).

Allowable Subject Matter

4. Claims 13-14 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claims 18, 24, and 26-27 are allowed.

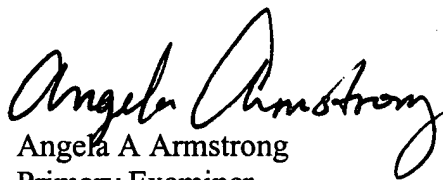
Response to Arguments

Applicant's arguments with respect to claims 1-21 and 24-28 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Angela A Armstrong
Primary Examiner
Art Unit 2626

AAA
August 7, 2006